

A FOSSIL SPARROW-LIKE BIRD

WE recently referred to a new genus and species of Passerine bird, described by Mr. J. A. Allen from a specimen found preserved in the insect-bearing shales of

Florissant, Colorado. We give an illustration of these remains, which consist of the greater part of a skeleton, embracing all of the bones of the anterior and posterior extremities (excepting the femora). Unfortunately, the bill and the anterior portion of the head are wanting, but the

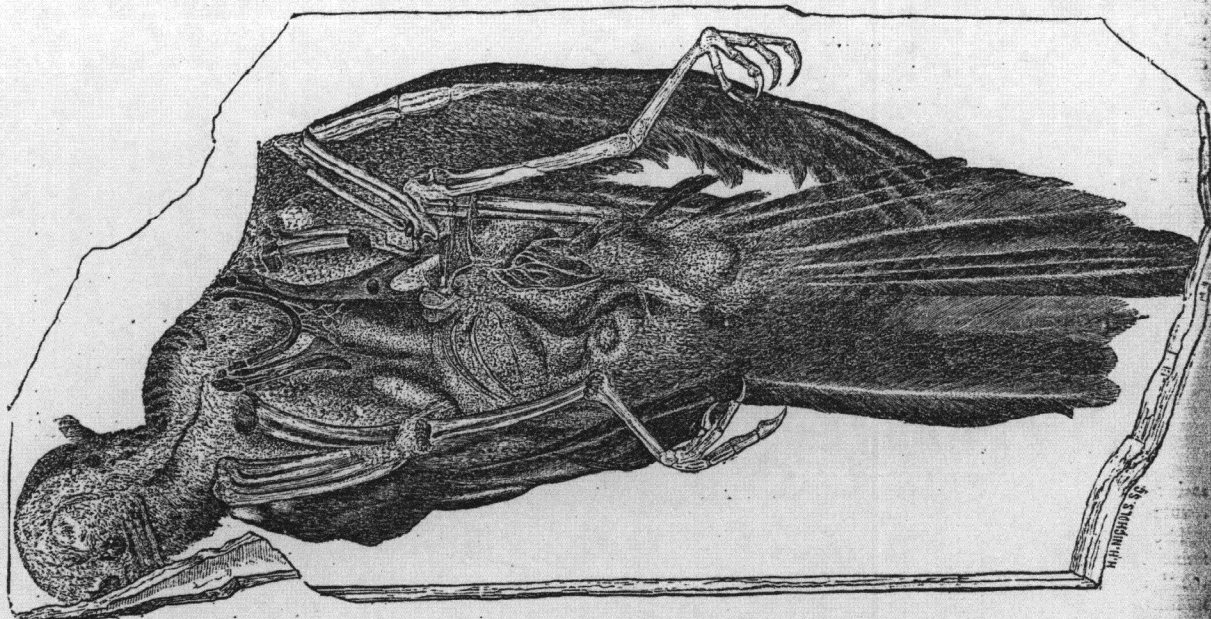


FIG. 1.

outlines of the remainder of the head and of the neck are distinctly traceable. The bones are all *in situ*, and indicate beyond question a high ornithic type, probably referable to the Oscine division of the *Passeres*. The specimen bears also remarkably distinct impressions of the wings and tail, indicating not only the general form of these parts, but even the shafts and barbs of the feathers.

In size and in general proportions the present species differs little from the Scarlet Tanager (*Pyrranga rubra*) or the Cedar-bird (*Ampelis cedrorum*). The bones of the wings, as well as the wings themselves, indicate a similar alar development; but the tarsi and feet are rather smaller and weaker; and hence in this point the agreement is better with the short-legged Pewees (genus *Contopus*). These features indicate arboreal habits and well-developed powers of flight. The absence of the bill renders it impossible to assign the species to any particular family, but the fossil on the whole gives the impression of Fringilline affinities.

It is called *Palaeospiza bella*. Its wings are rather long and pointed; the tail is (apparently¹) about two-thirds the length of the wing, rounded or graduated, the outer feathers (as preserved) being much shorter than the inner. The feet and toes it will be seen are strictly those of a perching bird, and the proportionate length of the bones of the fore and hind limbs is the same as in ordinary arboreal *Passeres*, especially as represented by the *Tanagridæ*.

The most remarkable feature of the specimen is the definiteness of the feather impressions. Both the shafts and the barbs are shown with great distinctness in the rectrices, and the tips of the primaries of one wing are also sharply defined, overlying the edge of the partly-expanded tail. The tip of the opposite wing can also be seen beneath the tail. The feet are so beautifully preserved that even the claws are perfectly distinct (Fig. 1).

¹ The character of the tail must be given with reservation, since it is not quite certain that the whole of the tail, or that the exact form of the terminal portion, is shown, especially as the preserved impression is somewhat unsymmetrical.

Another very imperfect specimen from the same locality, and probably representing the same species, consists of the tip of the tail and about the apical third of a half-

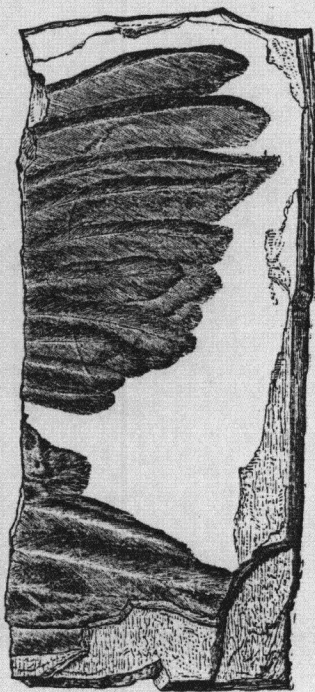


FIG. 2.

expanded wing (Fig. 2). In this example the tail is also pointed and graduated.

The larger specimen, that first described, is divided into

an upper and a lower half, the greater part, however, adhering to the lower slab. The bones adhere about equally to the two faces. The drawing is made from the lower slab, with some of the details filled in from the upper one. The feather impressions are about equally distinct on both, and where in either case the bones are absent exact moulds of them remain, so that the structure can be seen and measurements taken almost equally well from either slab.

The species here described is of special interest as being the first fossil Passerine bird discovered in North America, although birds of this group have been known for many years from the tertiary deposits of Europe.

The author is indebted for the opportunity of describing these interesting specimens to Mr. S. H. Scudder, who obtained them during his last season's (1877) explorations of the Florissant insect-beds. The specimens are now the property of the Boston Society of Natural History.